

**Joint Meeting of the
Environmental Research Institute of the States (ERIS) Board and
US EPA Office of Research and Development (ORD)
July 11-12, 2017**

DRAFT AGENDA

Tuesday, July 11, 2017

Groundwater, Watershed and Ecosystem Restoration Division (GWERD)

US EPA ORD National Risk Management Research Laboratory

Robert S. Kerr Environmental Research Center

919 Kerr Research Drive

Ada, OK 74820

- 7:45 am **Meet in Skirvin Hilton Hotel lobby to break into groups to drive to Ada**
1 Park Ave, Oklahoma City, OK 73102
- 10:00 am **Welcome ERIS members in the lobby of Robert S. Kerr Environmental Research Center**
- 10:15 am **Welcome and Introductions**
David Paylor, ERIS President and Director, Virginia DEQ
Bob Kavlock, Acting Assistant Administrator for Research & Development and EPA Science Advisor
- 10:30 am **EPA ORD Perspective/Overview for New Members**
Bob Kavlock
- Administrator's priorities
 - Longer term research
 - Research on specific environmental challenges
 - Technical and emergency support
 - Partnering with states
- 11:00 am **Update on EPA ORD Budget/Implications for States**
Chris Robbins, Acting ORD Deputy Assistant Administrator for Management
- Budget update
 - ORD Facility Economic Impacts
 - New stories to highlight how EPA research and technical assistance have helped the states
 - Active STAR grants by state

Engaging States in EPA Research

David Paylor and Jennifer Orme-Zavaleta, Director, ORD National Exposure Research Laboratory, moderators

- 11:30 am **Follow-up to 2016 ERIS States' Research Needs Survey**
- Initial calls with states to clarify science needs for state identified priorities and call with ITRC State Engagement POCs
 - Next steps include conversations with ECOS media committees
 - What role ERIS might play relative to ECOS media committees?

- How EPA ORD will use survey to strengthen alignment of its research program with states' immediate and long-term science needs
- Communicating the results
- Lessons learned for 2018 biennial survey

12:30 pm **Lunch**

Order in from Heavenly Buns Deli (*self pay*)

https://www.facebook.com/pg/heavenlybuns.deli/menu/?ref=page_internal

Please bring cash plus ~10% tax

EPA-ECOS-ASTHO Pilots: Status Updates

Lisa Matthews, ORD State Liaison, moderator

1:00 pm **Wildfire Smoke: A Guide for Public Health Officials**

Wayne Cascio, Director, Environmental Public Health Division, ORD National Health and Environmental Effects Research Laboratory (via videoconference)

1:15 pm **Community-Focused Exposure and Risk Screening Tool (C-FERST)**

Lee Riddick, ORD National Exposure Research Laboratory (via videoconference)

ORD Groundwater, Watershed and Ecosystem Restoration Division (GWERD)

Cindy Sonich-Mullin, Director, National Risk Management Research Laboratory, moderator

1:30 pm **GWERD Overview**

Richard Lowrance, Director, GWERD, National Risk Management Research Laboratory, US EPA ORD

1:45 pm **Research Vignettes (~15 mins each and a few minutes for questions after each)**

- Research and Technical Support for Cleaning up Contaminated Sites – *David Jewett, presenter*
- Innovative Subsurface Remediation Technologies – *Rick Wilkin, presenter*
- Managing Risks from Leaking Underground Storage Tanks – *Jim Weaver, presenter*
- Managing Risks to Watershed Water Quality – *Ken Forshay, presenter*

3:00 pm **Break**

3:10 pm **GWERD Tour**

Richard Lowrance

3:45 pm **Meet in the lobby of Robert S. Kerr Environmental Research Center for drive back to Oklahoma City**

6:10 pm **Meet in Skirvin Hotel Lobby for Optional Visit to Village Green Station**

Myriad Botanical Gardens in the Children's Garden area (south side of park)

301 W. Reno Ave., Oklahoma City, OK 73102

0.4 miles – 7 minute walk

7:00 pm **Group Dinner – Flint Restaurant** (*self pay – reservation under Matthews*)
15 N. Robinson Ave., Oklahoma City, OK 73102
<http://www.flintokc.com/>
0.23 miles from Skirvin Hilton

Wednesday, July 12, 2017

*Oklahoma Department of Environmental Quality
707 N. Robinson
Multipurpose Room, 1st floor
Oklahoma City, OK 73102*

8:45 am **Day 2 Kick Off and Recap Day One**
David Paylor and Chris Robbins

9:00 am **Overview of Oklahoma DEQ**
Scott Thompson, Director, Oklahoma DEQ

9:15 am **Environmental Challenges facing Oklahoma and Discussion**
*Michael Teague, Oklahoma Secretary of Energy and Environment
and Scott Thompson*

10:15 am **Break**

10:30 am **Lead and Copper Rule Update**
XX, EPA Office of Water

11:00 am **Perfluorinated Chemicals Update**
Bob Kavlock

11:30 am **New MOA Pilots on Risk Communication**
*Martha Rudolph, Director of Environmental Programs at Colorado Department of Public
Health and Environment, Jennifer Orme-Zavaleta*

- PFAS
- Harmful algal blooms

12:00 pm **Lunch on your own**
Nebu (in Devon Tower)
333 W. Sheridan Ave., Oklahoma City, OK 73102
<http://www.cafenebu.com/>
0.7 miles - 13 minute walk

1:15 pm **Regional Perspectives and Discussion**
Jennifer Orme-Zavaleta, moderator

- Jeaneanne Gettle, Director, Science and Ecosystem Support Division, Athens, GA
EPA Region 4 (ORD lead region)
- Sam Coleman (invited), Acting Regional Administrator, EPA Region 6
- ORD's Regional Science Program, Fred Hauchman, Director, ORD Office of
Science Policy

- 2:00 pm **ERIS Strategic Plan Progress Report and where we should focus our efforts**
David Paylor and Carolyn Hanson, ECOS
- 2:45 pm **Break**
- 3:00 pm **Planning for ECOS Fall Meeting**
David Paylor, moderator
- 3:30 pm **Wrap Up and Action Items**
David Paylor and Chris Robbins
- 4:00 pm **Optional Visit to Oklahoma City National Memorial & Museum/time for ERIS Board to meet on its own**
620 N. Harvey Ave., Oklahoma City, OK 73102 (next door to OK DEQ)
Last tickets to museum sold at 5 pm – Adults \$15 - museum closes at 6 pm
- Dinner on your own**

Agenda Topics

Wildfire Smoke: A Guide for Public Health Officials – Wayne Cascio, presenter

EPA, with federal and state partners, updated the Wildfire Smoke: A Guide for Public Health Officials (Wildfire Guide) in May 2016. This Guide, which was last revised in 2008, provides readily available information that outlines whose health is most affected by wildfire smoke, how to reduce exposure to smoke, what public health actions are recommended, and how to communicate air quality to the public. The updated Guide provides the most current scientific information, and it provides an opportunity for state environment and health officials to provide consistent guidance to the public over large geographical areas often times involving multiple states. This information also supplements ongoing ASTHO and ECOS efforts to address asthma in children due to environmental exposures. The Wildfire Guide is the product of a collaborative effort by scientists, air quality specialists and public health professionals from federal, state and local agencies, and it has been widely used by state and local agencies in wildland fire situations. EPA's Office of Air and Radiation and ORD have coordinated state input with other federal partners such as the Centers for Disease Control and Prevention and U.S. Forest Service. EPA is currently developing a final Guide based on state feedback, which is expected to be available in the fall of 2017.

Community-Focused Exposure and Risk Screening Tool (C-FERST) – Lee Riddick, presenter

C-FERST is an online information access and mapping tool that communities can use to learn more about their environmental issues and exposures. It provides step-by-step guidance for community-based assessments, as well as a means to communicate and translate relevant science to communities. C-FERST, developed by ORD, is intended to serve the needs of a broad range of users, including the general public, environmental and public health professionals, state and local risk assessors, EPA community involvement coordinators and environmental justice coordinators working on local-scale issues, and academic institutions serving local communities. As targeted users of C-FERST, input from state environmental and public health agencies is critical to realize its full value. In August 2015, a pre-release version of C-FERST was shared with states for beta testing. In 2016, ECOS and ASTHO worked with state representatives to identify any concerns about the tool and provide feedback to EPA about how C-FERST can

best support state programs. The states partnered with EPA ORD to develop an engagement strategy and roll out plan to help make C-FERST a more useful tool for state programs to provide to the public, and also assisted EPA ORD in placing C-FERST in the context of related environmental public health tracking tools. EPA is currently developing training materials and plans to hold web-based training for the states in summer 2017.

Research and Technical Support for Cleaning up Contaminated Sites – *David Jewett, presenter*

The Comprehensive Environmental Response, Compensation, and Liability Act and the Resource Conservation and Recovery Act form the foundation for federal and state management of hazardous waste sites and contaminated sites in general. EPA ORD and the Office of Land and Emergency Management are jointly responsible for the Technical Support Project to provide scientific expertise for complex contaminant remediation problems for soils, sediments and the subsurface environment. ORD scientists and technical staff provide technical support activities, including reports and models, to characterize and clean up contaminated sites and provide the scientific foundation and technical knowledge for our federal, state and local partners. Technology transfer products and outputs from research activities support remedial project managers and other site management personnel, who then engage communities. These products and outputs address how contamination, from single or multiple sources, can be effectively characterized and optimally remediated to protect community public health and their resources and beneficial uses, and for revitalization and reuse of these sites. The Technical Support Project provides and explains new and improved techniques and strategies for characterizing and remediating contaminated groundwater, vapors, soils and sediments to improve community public health and facilitate revitalization of land and water resources.

Innovative Subsurface Remediation Technologies – *Rick Wilkin, presenter*

Remediation and changing remediation standards were top priorities for states in the 2016 ERIS survey. EPA ORD scientists have developed and tested many of the innovative remediation technologies currently used for groundwater including permeable reactive barriers, monitored natural attenuation, thermal remediation, subsurface barriers, soil vapor extraction, in-situ chemical oxidation, and in-situ chemical reduction. Research conducted in conjunction with federal, state and local remediation authorities provide unique real-world tests of remediation technologies. By working in these real-world situations, researchers can test the efficiency and effectiveness of remediation technologies on appropriate spatial and time scales and for a variety of contaminant types including heavy metals, chlorinated solvents and mixed plumes. ORD undertakes long-term research on contaminant remediation technologies to determine how long a remediation technology will continue to be effective because many of the contamination problems persist over decades. Important results from these real-world studies include new understanding of 1) the effective lifetime of permeable reactive barriers; 2) how to place reactants and energy in the subsurface environment to increase treatment effectiveness; and 3) how to maximize and monitor the use of natural processes for remediation.

Managing Risks from Leaking Underground Storage Tanks – *Jim Weaver, presenter*

Leaking underground storage tank sites pose two major risk pathways – the consumption of petroleum contaminated water from private domestic wells and petroleum vapor intrusion into buildings. Private wells are not regulated under the Safe Drinking Water Act and routine testing is not required. Because the locations of these wells are not well-known on a state-wide or national level, ORD scientists have used data from states and the U.S. Census Bureau to estimate areas of the country with high reliance on private domestic wells. These include rural areas without public water, but also expanding cities and suburbs, and pockets of historic private well use in urban areas. With this as a basis, mapping software was developed to relate underground

storage tank locations with private domestic wells and indicate sites with the most potential for impact. The risk of petroleum vapor intrusion into building is generally highest if the source is fresh or located just beneath the building. Factors such as degradation above the water-table and several soil and building characteristics are important to understand petroleum vapor intrusion. The PVI-Screen model was developed by ORD to integrate these effects and to quantitatively consider uncertainties in the processes governing vapor intrusion. By estimating the impacts of unmeasured or difficult-to-measure parameters, better decisions can be made for either further site sampling or closure.

Managing Risks to Watershed Water Quality – *Ken Forshay, presenter*

Watershed based management of water quality is a key component of addressing a top state priority in the 2016 ERIIS survey – surface water and groundwater quality. The Clean Water Act establishes the basic structure for regulating discharges of pollutants into the waters of the United States and regulating quality standards for surface waters. Better technical insight into the benefits of enhanced ecosystem services in watersheds, like floodwater protection, runoff retention and nonpoint source pollution control, combined with greater demands for water and maintenance of aged and degraded water infrastructure has led to innovative and potentially sustainable water management solutions that are beginning to develop across the nation. We evaluate some of these innovative solutions like levee setbacks, indirect discharge of municipal effluent, alternative wastewater re-use, innovative stormwater retention, and enhanced aquifer storage to determine the effects on surface and groundwater using cutting edge science and research techniques. N-Sink, a model that allows the user to look at potential nitrogen loadings from locations within a watershed, is one example of tools applied by ORD scientists to help manage risks to watershed water quality.